

We Claim:

1. A flat cable circuit board assembly, comprising:
a flat cable having a plurality of round conductors therein and a circuit
board having a plurality of solder pads; and
5 wherein the flat cable has at least one terminal end where the round
conductors are exposed and soldered to the solder pads.

2. The flat cable circuit board assembly of claim 1, wherein the flat
cable is formed without the use of adhesives.

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3. The flat cable circuit board assembly of claim 1, wherein the flat
cable is formed of a top and bottom insulating layer surrounding the round
conductors, the top and bottom insulating layers being sonically bonded to one
another to seal the round conductors.

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4. The flat cable circuit board assembly of claim 1, wherein the flat
cable is used in a clockspring.

5. A clockspring for an use in an automobile comprising:
20 a housing holding a flat cable therein, the flat cable having round
conductors and at least one end of the flat cable having its round conductors
exposed and terminated by soldering to solder pads on a circuit board.

6. The clockspring of claim 5 wherein the flat cable is formed without the use of adhesives.

5 7. The clockspring of claim 5 wherein the flat cable is formed of a top and bottom insulating layer surrounding the round conductors, the top and bottom insulating layers being sonically bonded to one another to seal the round conductors.

10 8. A clockspring for use in a vehicle, comprising:
a clockspring housing having a circuit board adapted to be soldered to a flat electrical cable;
the circuit board including contacts connected to conductors placed onto the circuit board and solder pads connected to the conductors; and
15 wherein the solder pads are adapted to be soldered to conductors of the flat electrical cable.

9. The clockspring of claim 8, wherein the solder pads include a layer of solder paste for soldering to the conductors of the flat electrical cable.

20 10. A method of securing a flat cable to a circuit board comprising:

providing a flat cable having a plurality of round conductors therein and a circuit board having a plurality of solder pads;

stripping an end of the flat cable to expose the round conductors therein, and placing the round conductors onto the solder pads; and

5 soldering the round conductors to the solder pads.

11. The method of claim 10, wherein the flat cable is formed without the use of adhesives.

10 12. The method of claim 11 wherein the flat cable is formed of a top and bottom insulating layer surrounding the round conductors, the top and bottom insulating layers being sonically bonded to one another to seal the round conductors.

15 13. The method of claim 10 wherein a soldering paste overlies the soldering pads, and the soldering step uses a hot bar soldering process.

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